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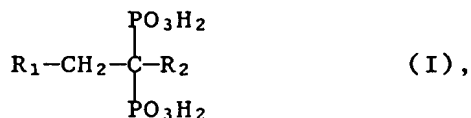
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Novel substituted alkanediphosphonic acidsAbstract of the Disclosure

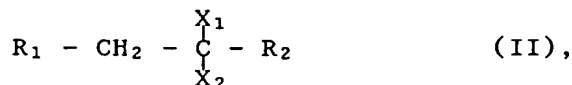
Alkanediphosphonic acids, in particular heteroarylalkanediphosphonic acids of formula

Tool 10X



PS wherein  $\text{R}_1$  is a 5-membered heteroaryl radical which may be fused with benzene or cyclohexene nuclei and which contains, as hetero atoms, 2 to 4 N-atoms or 1 or 2 N-atoms as well as 1 O- or S-atom, and which is unsubstituted or C-substituted by lower alkyl, phenyl or phenyl which is substituted by lower alkyl, lower alkoxy and/or halogen, or by lower alkoxy, hydroxy, di-lower alkylamino, lower alkylthio and/or halogen, and/or is N-substituted at a N-atom which is capable of substitution by lower alkyl, lower alkoxy and/or halogen, and  $\text{R}_2$  is hydrogen, hydroxy, amino, lower alkylthio or halogen, and salts thereof, have regulatory action on calcium metabolism and can be used as medicaments for the treatment of diseases associated with impairment of calcium metabolism. The compounds are obtained for example by converting, in a compound of formula

Tool 11X



PS wherein  $\text{X}_1$  is a functionally modified phosphono group and  $\text{X}_2$  is a free or functionally modified phosphono group,  $\text{X}_1$  and, if appropriate  $\text{X}_2$ , into the free phosphono group.

This is a continuation-in-part of application Serial No. 120,284  
filed on November 13, 1987.

B-26-87